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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,207	06/27/2001	John Michael Cotte	YOR920010091US1(14299)	5007

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EXAMINER

PERKINS, PAMELA E

ART UNIT

PAPER NUMBER

2822

DATE MAILED: 10/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/893,207

Applicant(s)

COTTE ET AL.

Examiner

Pamela E Perkins

Art Unit

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This office action is in response to the filing of the application papers on 27 June 2001. Claims 1-20 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

- (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
- (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1, 2, 15 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Koch (6,331,487).

Koch discloses a method of cleaning a precision surface where a substrate is cleaned, after planarizing a surface of the substrate, using a surfactant, supercritical carbon dioxide, and a co-solvent, a fluoride, at a temperature of 20 to 70°C and a pressure of 1050 to 6000 psig to remove residue from the surface of the substrate (col. 1, line 62 thru col. 3, line 35).

Claim Rejections - 35 USC § 103

Art Unit: 2822

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koch in view of Alm *Formulation Techniques Using Triflic Acid Salts*

Koch discloses a method of cleaning a precision surface where a substrate is cleaned, after planarizing a surface of the substrate, using a surfactant, supercritical carbon dioxide, and a co-solvent, a fluoride, at a temperature of 20 to 70°C and a pressure of 1050 to 6000 psig to remove residue from the surface of the substrate (col. 1, line 62 thru col. 3, line 35). Koch does not disclose the fluoride selected from a group comprising fluorosulfonic acid, perfluorosulfonic acid, pyridine:hydrogen fluoride, amine:hydrogen fluoride, alklamine:hydrogen fluoride, quaternary amine fluoride, tetraalkylammonium fluoride, perfluoroalkylammonium fluoride, trifluoromethylsulfonyl fluoride, perfluorooctylsulfonyl fluoride, arylsulfonyl fluoride, benzene diazonium fluoride and benzene diazonium tetrafluoroborate.

Alm disclose a method of fluoride compounds where fluorosulfonic acid, perfluorosulfonic acid, pyridine:hydrogen fluoride, amine:hydrogen fluoride, alklamine:hydrogen fluoride, quaternary amine fluoride, tetraalkylammonium fluoride, perfluoroalkylammonium fluoride, trifluoromethylsulfonyl fluoride, perfluorooctylsulfonyl fluoride, arylsulfonyl fluoride, benzene diazonium fluoride and benzene diazonium tetrafluoroborate are used in coating processes (page 1; table 1-2). It would have been

Art Unit: 2822

obvious to one of ordinary skill in the art at the time the invention was made to modify Koch by selecting a fluoride from a group comprising fluorosulfonic acid, perfluorosulfonic acid, pyridine:hydrogen fluoride, amine:hydrogen fluoride, alklamine:hydrogen fluoride, quaternary amine fluoride, tetraalkylammonium fluoride, perfluoroalkylammonium fluoride, trifluoromethylsulfonyl fluoride, perfluorooctylsulfonyl fluoride, arylsulfonyl fluoride, benzene diazonium fluoride and benzene diazonium tetrafluoroborate as taught by Alm to act as a catalyst in reactions in coating processes.

Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koch in view of Hirayama et al. (6,316,057).

Koch discloses a method of cleaning a precision surface where a substrate is cleaned, after planarizing a surface of the substrate, using a surfactant, supercritical carbon dioxide, and a co-solvent, a fluoride, at a temperature of 20 to 70°C and a pressure of 1050 to 6000 psig to remove residue from the surface of the substrate (col. 1, line 62 thru col. 3, line 35). Koch does not disclose the substrate comprising a metal, the metal selected from a group consisting of aluminum, silicon, tungsten, titanium, tantalum, platinum, palladium, iridium, chromium, copper and silver and a polymer selected from a group consisting of polyimides and polyamides or insulators.

Hirayama et al. disclose a method of making a semiconductor device where a substrate is coated with a material selected from a group comprising aluminum, silicon, tungsten, titanium, tantalum, platinum, palladium, iridium, chromium, copper and silver and a polymer selected from a group consisting of polyimides and polyamides or insulators (col. 1, lines 62-67; col. 3, lines 24-60). It would have been obvious to one

Art Unit: 2822

ordinary skill in the art at the time the invention made to modify Koch by the substrate comprising a metal, the metal selected from aluminum, silicon, tungsten, titanium, tantalum, platinum, palladium, iridium, chromium, copper and silver and a polymer selected from a group consisting of polyimides and polyamides or insulators as taught by Hirayama et al. to form well-adhered thin layers on the substrate.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kuo et al. (6,451,926) disclose fluorosulfonic acid and perfluorosulfonic acid ; Kirsch et al. (6,056,895) disclose pyridine:hydrogen fluoride, amine:hydrogen fluoride and alklamine:hydrogen fluoride; Moulton (5,868,916) discloses onium fluoride salt; Schneller et al. (4,678,737) disclose benzene diazonium tetrafluoroborate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pamela E Perkins whose telephone number is (703) 605-4299. The examiner can normally be reached on Monday thus Friday, 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead can be reached on (703) 308-4940. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3432 for regular communications and (703) 305-3432 for After Final communications.

Art Unit: 2822

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

pep
October 1, 2002


CARL WHITEHEAD, JR.
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